



Complete Summary

GUIDELINE TITLE

Knee complaints.

BIBLIOGRAPHIC SOURCE(S)

Knee complaints. Elk Grove Village (IL): American College of Occupational and Environmental Medicine (ACOEM); 2004. 31 p. [87 references]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Harris, J, ed. Occupational Medicine Practice Guidelines: American College of Occupational and Environmental Medicine. Beverly Farms, MA: OEM Press; 1997.

**** REGULATORY ALERT ****

FDA WARNING/REGULATORY ALERT

Note from the National Guideline Clearinghouse: This guideline references a drug(s) for which important revised regulatory information has been released.

- [June 15, 2005, Non-Steroidal Anti-Inflammatory Drugs \(NSAIDs\)](#): U.S. Food and Drug Administration (FDA) recommended proposed labeling for both the prescription and over the counter (OTC) NSAIDs and a medication guide for the entire class of prescription products.
- [April 7, 2005, Non-steroidal anti-inflammatory drugs \(NSAIDs\) \(prescription and OTC, including ibuprofen and naproxen\)](#): FDA asked manufacturers of prescription and non-prescription (OTC) non-steroidal anti-inflammatory drugs (NSAIDs) to revise their labeling to include more specific information about potential gastrointestinal (GI) and cardiovascular (CV) risks.

COMPLETE SUMMARY CONTENT

**** REGULATORY ALERT ****

SCOPE

METHODOLOGY - including Rating Scheme and Cost Analysis

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SCOPE

DISEASE/CONDITION(S)

Knee complaints

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Treatment

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Orthopedic Surgery
Physical Medicine and Rehabilitation
Preventive Medicine
Surgery

INTENDED USERS

Advanced Practice Nurses
Physician Assistants
Physicians
Utilization Management

GUIDELINE OBJECTIVE(S)

- To provide information and guidance on generally accepted elements of quality care in occupational and environmental medicine
- To improve the efficiency with which the diagnostic process is conducted, the specificity of each diagnostic test performed, and the effectiveness of each treatment in relieving symptoms and achieving cure
- To present recommendations on assessing and treating adults with potentially work-related knee complaints

TARGET POPULATION

Adults with potentially work-related knee complaints seen in primary care settings

INTERVENTIONS AND PRACTICES CONSIDERED

Note from the National Guideline Clearinghouse (NGC): The following general clinical measures were considered. Refer to the original guideline document for information regarding which specific interventions and practices under these general headings are recommended, optional, or not recommended by the American College of Occupational and Environmental Medicine.

1. History
2. Physical exam
3. Patient education
4. Medication
5. Physical treatment methods
6. Aspirations and injections
7. Rest and immobilization
8. Activity and exercise
9. Detection of neurologic abnormalities
10. Radiography
11. Imaging
12. Surgical considerations

MAJOR OUTCOMES CONSIDERED

Missed work days

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Note from the National Guideline Clearinghouse (NGC): The American College of Occupational and Environmental Medicine contracted the Work Loss Data Institute to provide medical library research services.

Disability-Duration Data

This edition includes disability-duration data that have been extracted from National Health Interview Survey data. Only data from interviews with individuals without workers' compensation claims has been included.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus
Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

A = Strong research-based evidence (multiple relevant, high-quality scientific studies).

B = Moderate research-based evidence (one relevant, high-quality scientific study or multiple adequate scientific studies).

C = Limited research-based evidence (at least one adequate scientific study of patients with knee complaints).

D = Panel interpretation of information not meeting inclusion criteria for research-based evidence.

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Contributors reviewed at least one chapter each and reviewed the relevant medical literature that had been published since the creation of the original Guidelines in 1997.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Following the chapter and literature review, participants provided written or verbal comments to the American College of Occupational and Environmental Medicine's Practice Guidelines Committee.

Verbal comments were in the form of participation in multi-specialty conference calls, during which the issues raised in each chapter were extensively discussed. Draft chapters were prepared and distributed by the American College of Occupational and Environmental Medicine to all chapter reviewers. Follow-up multi-specialty teleconferences were then held as appropriate, during which time the draft was again reviewed.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Recommendations are followed by evidence classification (A-D) identifying the type of supporting evidence. Definitions for the types of evidence are presented at the end of the "Major Recommendations" field.

Summary of Recommendations for Evaluating and Managing Knee Complaints (refer to the original guideline document for more detailed information)

Clinical Measure	Recommended	Optional	Not Recommended
History	Basic history, with careful search for mechanism of injury (C, D)		
Physical exam	Focused physical exam, including ligament testing and careful search for any swelling (C, D)		
Patient education	Patient education Full disclosure of diagnostic accuracy, prognosis, and expectations of treatment (D)		
Medication (See Chapter 3 in the original guideline document)	Acetaminophen Aspirin (C, D)	Opioids for severe pain Non-steroidal anti-inflammatory drugs (NSAIDs) (C, D)	Use of opioids for more than 2 weeks (C, D)
Physical treatment	Nonoperative rehabilitation for medial		Passive modalities without exercise program

Clinical Measure	Recommended	Optional	Not Recommended
methods	collateral ligament injuries (C, D) Short postoperative rehabilitation for anterior cruciate ligament (ACL) repair prior to home exercise program (D) Conservative treatment for selected ruptures of the ACL (D) Exercises for cases of anterior knee pain or ligament strain(D)		(D) Manipulation (D)
Aspirations and injections	Aspiration of tense acute effusions (D) Aspiration of tense prepatellar bursa (D)	Repeated aspirations or corticosteroid injections (D)	Aspiration through infected area (D)
Rest and immobilization	Short period of immobilization after an acute injury to relieve symptoms (C)	Functional bracing as part of a rehabilitation program (D)	Prophylactic braces (D) Prolonged bracing for ACL deficient knee (D)
Activity and exercise	Stretching Aerobic exercise Maximal activity of other parts while recovering from knee injury (D)		Excessive rest (may lead to generalized debilitation) (D)
Detection of neurologic abnormalities			Electrical studies (contraindicated for nearly all knee injury diagnoses) (D)
Radiography	Plain-film radiographs for suspected red flags (C)	Plain-film radiographs for tense hemarthroses (C)	Routine radiographic film for most knee complaints or injuries (C)
Imaging	Magnetic resonance imaging (MRI) study to determine extent of ACL tear preoperatively (C)		MRI for ligament collateral tears (C)
Surgical considerations	Arthroscopic meniscectomy or repair	ACL reconstruction	Surgical repair of isolated medial collateral

Clinical Measure	Recommended	Optional	Not Recommended
	for severe mechanical symptoms and signs or serious activity limitations if MRI findings are consistent for meniscal tear (C, D) ACL repair for symptomatic instability (i.e., serious activity limitation) if results of Lachman and pivot-shift tests and MRI are positive (C, D)	before rehabilitation has been attempted (C, D)	ligament (MCL) ruptures (D) Immediate surgical reconstruction of all ACL tears on basis of MRI findings without physical findings confirming diagnosis or worker life demands requiring high knee performance (D)

Definitions:

Levels of Evidence

A = Strong research-based evidence (multiple relevant, high-quality scientific studies).

B = Moderate research-based evidence (one relevant, high-quality scientific study or multiple adequate scientific studies).

C = Limited research-based evidence (at least one adequate scientific study of patients with knee complaints).

D = Panel interpretation of information not meeting inclusion criteria for research-based evidence.

CLINICAL ALGORITHM(S)

The following clinical algorithms are provided in the original guideline document:

- American College of Occupational and Environmental Medicine Guidelines for care of acute and subacute occupational knee complaints
- Initial evaluation of occupational knee complaints
- Initial and follow-up management of occupational knee complaints
- Evaluation of slow-to-recover patients with occupational knee complaints (symptoms >4 weeks)
- Surgical considerations for patients with anatomic evidence of torn meniscus or ligament and persistent knee symptoms
- Further management of occupational knee complaints

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Improved efficiency of the diagnostic process
- Effective treatment resulting in symptom alleviation and cure

POTENTIAL HARMS

- False-positive or false-negative diagnostic tests
- Risks and complications of surgical procedures and imaging studies (e.g., infection, radiation)

CONTRAINDICATIONS

CONTRAINDICATIONS

Electrical studies are contraindicated for nearly all knee injury diagnoses

QUALIFYING STATEMENTS

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- The American College of Occupational and Environmental Medicine (ACEOM) provides this segment of guidelines for practitioners and notes that decisions to adopt particular courses of actions must be made by trained practitioners on the basis of the available resources and the particular circumstances presented by the individual patient. Accordingly, the ACOEM disclaims responsibility for any injury or damage resulting from actions taken by practitioners after considering these guidelines.
- The guidelines for modification of work activities and disability duration (see original guideline document) are general guidelines based on consensus or population sources and are never meant to be applied to an individual case without consideration of workplace factors, concurrent disease or other social or medical factors that can affect recovery. The parameters for disability duration are "consensus optimal" targets as determined by a panel of ACOEM members in 1996, and reaffirmed by a panel of ACOEM members in 2002. In most cases persons with one non-severe extremity injury can return to modified duty immediately. Restrictions should take into consideration the opposite extremity also to prevent strain injuries to the uninjured extremity.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Clinical Algorithm

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1997 (revised 2004)

GUIDELINE DEVELOPER(S)

American College of Occupational and Environmental Medicine - Medical Specialty Society

SOURCE(S) OF FUNDING

American College of Occupational and Environmental Medicine

GUIDELINE COMMITTEE

American College of Occupational and Environmental Medicine Practice Guidelines Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Chapter Lead: Lee S. Glass, MD

Committee Members: Jennifer H. Christian, MD, MPH, FACPM; Philip I. Harber, MD, MPH, FACOEM, FCCP; John P. Holland, MD, MPH, FACOEM; Kathryn L. Mueller, MD, MPH, FACEP, FACOEM; Douglas J. Patron, MD, MSPH; Bernyce M. Peplowski, DO, MS; and Jack Richman, MD, CCFP, DOHS, FACOEM

Timothy J. Key, MD, MPH, FACOEM, as Responsible Officer and ACOEM President Elect, and Edward A. Emmett, MD, MS, FACOEM, Chair of the ACOEM Council on Occupational and Environmental Medical Practice, contributed to the development of the guidelines as well.

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

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GUIDELINE AVAILABILITY

Print copies are available from ACOEM, 25 Northwest Point Boulevard, Suite 700, Elk Grove Village, IL 60007; Phone: 847-818-1800 x399. To order a subscription to the online version, call 800-441-9674 or visit <http://www.acoempracguides.org/>.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on May 31, 2006. The information was verified by the guideline developer on November 3, 2006.

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